

SEQUENCE LISTING

<110> Mitsuhashi, Kazuya
Yamamoto, Hiroaki
Matsuyama, Akinobu
Tokuyama, Shinji

<120> D-aminoacylase and gene encoding the same

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<150> JP 2000-019080

<151> 2000-01-27

<150> JP 2000-150578

<151> 2000-05-22

<160> 27

<170> PatentIn Ver. 2.0

<210> 1

<211> 1677

<212> DNA

<213> Hypomyces mycophilus

<400> 1

atgcggactg aaattctctt ccaactcagcc actgttatca cggcgatga agcagcccag 60
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tccatcaatg caactccaga tacgcggcat ctgcagctca caggctacat tctatctcct 180
ggtttcatcg atatgcatgc gcattcagac ctctacctac tctctcatcc tgaccacgag 240
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aatcctacag atgaggagtg cggacaact ctcaaaggcg ttggcatgtt tgaatggcag 420
actattgggg aatacttga ttgtttggag agaaacagga cggccactaa tgcgccatg 480
ttggttccgc aaggcaacct gagattattg gcatgtggcc catacgatac tccagcatct 540
gcagaagaga ttcaagatca aatccagctc ttgcgagagg ctatggctca ggggtgctgtc 600
gggatgtcta gtggtctcac ttatacacc cgcattgtatg cttccacgtc ggaactagct 660
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acgtatccat acttgccagg ctgtacaact ctggctgcat tgttgccaag ttgggcatct 960
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gaaatccaga tcgggacgac taatgaacca tcaatcgcat cgtattctgg tcgcaggcta 1140
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<210> 2

<211> 558

<212> PRT

<213> *Hypomyces mycophilus*

<400> 2

Met Arg Thr Glu Ile Leu Phe His Ser Ala Thr Val Ile Thr Gly Asp

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Glu Ala Ala Gln Pro Phe Val Ala Asp Val Leu Val Ser Lys Gly Leu

20

25

30

Ile Ala Lys Ile Gly Asn Pro Gly Ser Ile Asn Ala Thr Pro Asp Thr

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40

45

Arg His Leu Asp Val Thr Gly Tyr Ile Leu Ser Pro Gly Phe Ile Asp

50

55

60

Met His Ala His Ser Asp Leu Tyr Leu Leu Ser His Pro Asp His Glu

65

70

75

80

Ala Lys Ile Thr Gln Gly Cys Thr Thr Glu Val Val Gly Gln Asp Gly

85

90

95

Ile Ser Tyr Ala Pro Ile Arg Asn Val Asp Gln Leu Arg Ala Ile Arg

100

105

110

Glu Gln Ile Ala Gly Trp Asn Gly Asn Pro Thr Asp Glu Glu Cys Arg

115

120

125

Thr Thr Leu Lys Gly Val Gly Met Phe Glu Trp Gln Thr Ile Gly Glu

130

135

140

Tyr Leu Asp Cys Leu Glu Arg Asn Arg Thr Ala Thr Asn Val Ala Met

145

150

155

160

Leu Val Pro Gln Gly Asn Leu Arg Leu Leu Ala Cys Gly Pro Tyr Asp

165

170

175

Thr Pro Ala Ser Ala Glu Glu Ile Gln Asp Gln Ile Gln Leu Leu Arg

180

185

190

Glu Ala Met Ala Gln Gly Ala Val Gly Met Ser Ser Gly Leu Thr Tyr

195

200

205

Thr Pro Gly Met Tyr Ala Ser Thr Ser Glu Leu Ala Ser Leu Cys Ala

210

215

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Ala Leu Ala Gln Glu Phe Pro Gly Ala Phe Tyr Ala Pro His His Arg

225	230	235	240
Ser Tyr Gly Phe Gln Ala Ile Glu Ser Tyr Ala Glu Met Leu Asp Leu			
245	250	255	
Gly Glu Ser Thr Gly Cys Pro Ile His Leu Thr His Ala Thr Leu Asn			
260	265	270	
Phe Ser Glu Asn Lys Gly Lys Ala Pro Val Leu Ile Ser Met Val Asp			
275	280	285	
Lys Ser Leu Ala Ala Gly Val Asp Val Thr Leu Asp Thr Tyr Pro Tyr			
290	295	300	
Leu Pro Gly Cys Thr Thr Leu Ala Ala Leu Leu Pro Ser Trp Ala Ser			
305	310	315	320
Ala Gly Gly Pro Gln Glu Thr Leu Lys Arg Leu Glu Asp Ala Glu Ser			
325	330	335	
Arg Glu Lys Ile Arg Ile Ala Val Glu Ile Lys Gly Cys Asp Gly Gly			
340	345	350	
His Gly Ile Pro Thr Asn Trp Asp Glu Ile Gln Ile Gly Thr Thr Asn			
355	360	365	
Glu Pro Ser Ile Ala Ser Tyr Ser Gly Arg Arg Leu Ser Glu Val Ala			
370	375	380	
Gln Ser Val Gly Lys Pro Thr Ile Glu Val Phe Phe Glu Ile Leu Gln			
385	390	395	400
Lys Asp Lys Leu Ala Thr Ser Cys Ile Met His Val Gly Asn Glu Glu			
405	410	415	
Asn Val Arg Gln Ile Met Gln His Arg Val His Met Ala Gly Ser Asp			

420

425

430

Gly Ile Leu His Gly Gln Thr Leu His Pro Arg Ala Tyr Gly Thr Phe

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Thr Arg Tyr Leu Gly His Tyr Ser Arg Glu Leu Ser Leu Val Ala Leu

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Pro Ser Met Ile Ala His Leu Thr Ser Arg Pro Ala Lys Arg Leu Ser

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Val Tyr Pro Tyr Arg Gly Leu Ile Ala Glu Gly Ser Ala Ala Asp Ile

485

490

495

Val Val Phe Asn Pro Glu Thr Val Lys Asp Met Ser Thr Tyr Glu Glu

500

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510

Pro Lys Val Pro Ser Arg Gly Ile Arg Phe Val Leu Val Asn Gly Gln

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525

Ile Ala Val Asp Glu Gly Lys Met Thr Gly Thr Arg Gly Gly Lys Thr

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Leu Arg Arg Ser Thr Asp Gly Lys Val Lys Ala Arg Asp Glu

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<210> 3

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially

Synthesized Primer Sequence

<400> 3

cccggcttca tcgacatgca

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<210> 4

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 4

ttcatcgaca tgca ygcna

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<210> 5

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 5

tgnggngcrt craangcytg

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<210> 6

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 6

aangcytgng grtaytcrtc

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<210> 7

<211> 321

<212> DNA

<213> *Hypomyces mycophilus*

<400> 7

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 cgaagagctg gagctacatg gcctggcaat gccgaacctg ggaggtataa acgagcaatc 180
 catgcgccgc gccatatcta caggcacaca cggcagcagc atccaccacg gcctcatgtc 240
 tgaggatatt ctgcgtctga aaatcactct cgcgggcggc aagacggagg catgctccaa 300
 agacgaatac cccaagcct t 321

<210> 8

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
 Synthesized Primer Sequence

<400> 8

aggccaaaat cacccaagga

20

<210> 9

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
 Synthesized Primer Sequence

<400> 9

attggggaat acttgattg

20

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 10

ctggttcttt ccgcctcaga

20

<210> 11

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 11

attaaccctc actaaagggc

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<210> 12

<211> 1325

<212> DNA

<213> *Hypomyces mycophilus*

<400> 12

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tggcccatag gatactccag catctgcaga agagattcaa gatcaaatcc agctcttgcg 120

agaggctatg gctcagggtg ctgtcgggat gtctagtggg ctcaattata cacccgcat 180
 gtatgcttcc acgtcggaac tagcttctct gtgcgcgcc ctcgcacaag aatttccagg 240
 tgcattctat gcgccacatc atagaagtta tgggttccag gccatcgaat gttatgccga 300
 aatgttggat ctgggagagt caacaggctg tccattcat cttacacatg caacgctcaa 360
 cttttcagaa aataagggtg aagctcctgt cctcatctct atggttgata aatctcttgc 420
 tgcaggcgtg gatgtcacac ttgatacgta tccatacttg ccaggctgta caactctggc 480
 tgcattgctg ccaagtcggg catctgctgg cggcccacaa gagacgctta aaaggcttga 540
 ggatgcagaa tcgagagaaa agattcgtat agccgtggaa atcaaagggt gtgatggcgg 600
 ccatggtatt ccaaccaact gggacgaaat ccagatcggg acgactaatg aaccatcaat 660
 cgcatcgtat tctggtcgca ggctatcaga agtggcacag tctgttggaag agccgacctat 720
 cgaagtcttt ttcgagattc tgcaaaagga taagctcgca acgagctgta tcatgcatgt 780
 tggcaatgaa gaaaacgtcc gacagatcat gcagcatcgg gtccatattg caggcagtga 840
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 caata 1325

<210> 13

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 13

cggagagtca acaggctgtc c

21

<210> 14

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 14

cgcaggctat cagaagtggc

20

<210> 15

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 15

atgccctca actggtctac

20

<210> 16

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 16

catatgatat cccgtcttgg

20

<210> 17

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 17

gattttggcc tcgtggcag

20

<210> 18

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 18

cctcagtgga tgttgccttt ac

22

<210> 19

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 19

gcctgtacgg aagtgttact

20

<210> 20

<211> 253

<212> DNA

<213> *Hypomyces mycophilus*

<400> 20

gtgagagagt aggtagaggt ctgaatgcgc atgcatatcg atgaaaccag gagatagaat 60
 gtagcctgtg acgtcgagat gccgcgtatc tggagttgca ttgatggaac cggggttacc 120
 aatcttggca atcagtcctt tcgaaaccag cacatcggcc acaaagggtt gggctgcttc 180
 atgccggtg ataacagtgg ctgagtggaa gagaatttca gtccgcatcg ttggcaatgg 240
 gaattcttct ggt 253

<210> 21

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
 Synthesized Primer Sequence

<400> 21

gagaagctta cagaattctc tccattattg ac 32

<210> 22

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
 Synthesized Primer Sequence

<400> 22

gagaagctta ccagaagaat tcccattgcc 30

<210> 23

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 23

gagaagcttg tacgatgaat aaatatatgt gt

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<210> 24

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificially
Synthesized Primer Sequence

<400> 24

gagaagctta ttgaccattt ccccatgac

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<210> 25

<211> 1897

<212> DNA

<213> Hypomyces mycophilus

<400> 25

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cactcagcca ctgttatcac cgcgatgaa gcagcccagc cctttgtggc cgaatgtgctg 180
gtttcgaagg gactgattgc caagattggt aaccccggtt ccatcaatgc aactccagat 240
acggggcatc tcgacgtcac aggctacatt ctatctcctg gtttcatoga tatgcatgcg 300
cattcagacc tctacctact ctctcatcct gaccacgagg ccaaaatcac ccaaggatgc 360
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ttgagggcga tccgagaaca gattgctgga tggaatggca atcctacaga ttaggagtg 480

cggacaactc tcaaaggcgt tggcatgttt gaatggcaga ctattgggga atacttggat 540
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 agattattgg catgtggccc atacgatact ccagcatctg cagaagagat tcaagatcaa 660
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 atgggggaaa tggtaataa gcttggcact ggccgtc 1897

<210> 26

<211> 25

<212> PRT

<213> *Hypomyces mycophilus*

<400> 26

Gly Phe Ile Leu Ser Pro Gly Phe Ile Asp Met His Ala His Ser Asp

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Leu Tyr Leu Leu Ser His Pro Thr His

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<210> 27

<211> 20

<212> PRT

<213> *Hypomyces mycophilus*

<400> 27

Val Leu Ala Asp Glu Tyr Pro Gln Ala Phe Tyr Ala Pro His Ala Tyr

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Ser Arg Gly Phe

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